

## DOCUMENT MODIFICATION REQUEST (DMR)

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Refer to 1-A01-PPG-001 for Processing Instructions  
Print or Type All Information (Except Signatures)

1 Date February 9 1995 25 DMR No 95-DMR-000094

2 Existing Document Number/Revision 5 21000-OPS GT 08/Rev 3			3 New Document Number or Document Number if it is to be changed with this Revision N/A		
4 Originator's Name/Phone/Page/Location Mark R Wood/8784/5904/080-641			5 Document Title SURFACE SOIL SAMPLING		
6 Document Type X Procedure <input type="checkbox"/> Other		7 Document Modification Type (Check only one) <input type="checkbox"/> New <input type="checkbox"/> Revision <input type="checkbox"/> Intent Change <input checked="" type="checkbox"/> Nonintent Change <input type="checkbox"/> Editorial Correction <input type="checkbox"/> Cancellation			
8 Item	9 Page	10 Step	11 Proposed Modifications		
1	6 of 41	4 0	First paragraph delete third sentence		
12 Justification (Reason for Modification EJO#, TP# etc) Procedure needed to be revised specifically for OU5 after DCN 93 01 expired Scope limitation to OU5 to maintain consistency with the OU5 RFI/RI Work Plan Expected expiration date of January 2 1996					
If modification is for a new procedure or a revision, list concurring disciplines in Block 13 and enter N/A in Blocks 14 and 15 If modification is for any type of change or a cancellation, organizations are listed in Block 13 then Concuror prints and signs in Block 14 and dates in Block 15					
13 Organization	14 Print and Sign (if applicable)				15 Date (if applicable)
BQS	C.A. Bicher 2-9-95				2-13-95
OUS PM	E.C. Mast 2/8/95				
OU 5 6 & 7 Closures	M.Z. Litaor 2-9-95				
SME					
16 Originator's Supervisor (print/sign/date) Ed Mast/ 2/8/95					
17 Assigned SME/Phone/Page/Location M Z Litaor/8583/nw/080	18 Cost Center 3102	19 Charge Number 98647900	20 Requested Completion Date February 15 1995	21 Effective Date 2/15/95	
22 Accelerated Review? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	23 ORC Review Not Required				
24 Responsible Manager (print/sign/date) Ed Mast/ 2/8/95					

REVIEWED FOR CLASSIFICATION/UCNI

BY NA  
DATE NA

ADMIN RECORD

A 0005-000641

<b>ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE EMD OPERATING PROCEDURES MANUAL VOLUME III GEOTECHNICAL</b>	<b>Manual No . Procedure No Page Effective Date Organization</b>	<b>5-21000-OPS-GT Table of Contents, Rev 621.S 1 of 3 02/15/95 Environmental Management</b>
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**THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES**

**VOLUME I FIELD OPERATIONS (FO)  
VOLUME II GROUNDWATER (GW)  
VOLUME III GEOTECHNICAL (GT)  
VOLUME IV SURFACE WATER (SW)  
VOLUME V. ECOLOGY (EE)  
VOLUME VI AIR (AP)**

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GT 01	Logging Alluvial and Bedrock Matenal	2	05/12/92
94-DMR-001007	LIMITED SCOPE - Section GT 01 Text and Form GT 1A Modification	2	06/01/94
GT 02	Drilling and Sampling Using Hollow Stem Auger Techniques	2	05/12/92
93-DMR-000955	Form GT 2A Modification	2	01/10/94
93-DMR-000960	QC Sample Collection Modification	2	01/10/94
94-DMR-000382	Approval Process and Sampling Collection Modification	2	03/28/94
94-DMR-000405	Sample Liner Taping Changes	2	03/28/94
94-DMR-000995	LIMITED SCOPE - Section GT 02 Text Modification	2	06/01/94
GT 03	Isolating Bedrock from Alluvium with Grouted Surface Casing	2	05/12/92
93-DMR-000956	Form GT 3A Modification	2	01/10/94
94-DMR-000418	Advanced Notification to the State of Colorado	2	04/22/94
95-DMR-000088	Haliburton Surface Casing Installation procedure	2	02/08/95
GT 04	Rotary Drilling and Rock Corng	2	05/12/92
93-DMR-000957	FORM GT 4A Modification	2	01/10/94
94-DMR-000419	Advanced Notification to the State of Colorado	2	04/22/94
94-DMR-000935	Procedure Modification to Allow Sonic Drilling Technique Usage	2	06/01/94
GT 05	Plugging and Abandonment of Boreholes	2	05/12/92
93-DMR-000961	Form GT 5A Modification	2	01/10/94

DOCUMENT CLASSIFICATION REVIEW  
PERFORMED BY: J. HOFFMAN, CLASSIFICATION OFFICE  
JUNE 11, 1991

**ROCKY FLATS ENVIRONMENTAL  
TECHNOLOGY SITE  
EMD OPERATING  
PROCEDURES MANUAL  
VOLUME III- GEOTECHNICAL**

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GT 06	Monitoring Wells and Piezometer Installation	2	05/12/92
94-DMR-000801	CO Regulatory Statute Reference Citations and Text Modification	2	06/01/94
94-DMR-000994	LIMITED SCOPE - Section 6 Text Modification	2	06/01/94
94-DMR-002107	TEMPORARY LIMITED SCOPE - IHSS 110 Screen Modifications	2	<b>EXPIRED</b>
94-DMR-002349	LIMITED SCOPE - Installation of Mini Wells	2	12/22/94
GT 07	Logging & Sampling of Test Pits and Trenches	2	05/12/92
94-DMR-000276	Section GT 07 and form Modifications	2	02/28/94
GT 08	4-E42-ER-OPS-GT 08 - Surface Soil Sampling	3	01/25/94
94-DMR-000133	Sampling Modifications	3	02/04/94
94-DMR-000229	Editorial Correction GT 08	3	03/14/94
94-DMR-000857	LIMITED SCOPE - Expansion of Scope of 94-DMR-000133	3	07/19/94
•95-DMR-000094	LIMITED SCOPE - Consistency with OU5 Work Plan	3	02/15/95
GT 09	Soil Gas Sampling and Field Analysis	2	05/12/92
94-DMR-000431	Calibration Occurrence Clarification	2	04/11/94
94-DMR-001521	Clarification of Soil Gas Procedures	2	09/02/94
94-DMR-002036	TEMPORARY LIMITED SCOPE - Interagency Agreement Air Velocity Measurement Required	2	<b>EXPIRED</b>
GT 10	Borehole Clearing	2	05/12/92
GT 11	Plugging and Abandonment of Wells	2	05/12/92
93-DMR-000962	Form GT 11A Modification	2	01/10/94
94-DMR-000561	Section 11 Modification	2	05/06/94
GT 15	Geophysical Borehole Logging	2	05/12/92
GT 17	Land Surveying	2	05/12/92
94-DMR-000560	Text Modification	2	05/06/94

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GT 18	Surface Geophysical Surveys	2	05/12/92
94-DMR-001997	LIMITED SCOPE - Seismic Refraction Surveys at OU4 for Phase II activities	2	10/27/94
GT 19	Field Gas Chromatographs	2	05/12/92
GT 20	Procedures for Soil Interstitial Water Sampling and Sampler Installation	2	05/12/92
94-DMR-000297	Section GT 20 and form Modifications	2	02/28/94
GT 21	Cone Penetrometer Testing	1	05/12/92
GT 24	Approval Process for Construction Activities on or Near Individual Hazardous Substance Sites (IHSSs)	0	05/12/92

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35	03/14/94	94-DMR-000229
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Field personnel are referred to procedure FO 13, Containerization, Preserving, Handling, and Shipping of Soil and Water Samples for further details. Above-surface plant parts and coarse material (pebbles, rocks, and stones) will be removed by the sampling team. ~~The soil samples will be classified according to procedure GT-1, Logging Alluvial and Bedrock Material.~~ For surficial profiling samples, the sampler will collect representative samples, including organic material and coarse material. All sampling equipment will be protected from the ground surface with plastic sheeting.

### 4.1 SOIL SAMPLING WITH THE CDH METHOD

#### 4.1.1 Introduction

The CDH sampler is one method for collecting soil samples for radionuclide analysis at the RFP. The CDH sampler was designed to sample radionuclides in the top-soil that could become resuspended in the air and thus pose a migration pathway by inhalation. The sampler is designed to obtain a sample from the upper surface 1/4 inch deep from an area 2 inches wide and 2 3/8 inches long, as shown in Figure GT 8-1.

Sampling locations will be described in the FSP. Some samples will be composited to obtain representative samples of large areas and others will be single-location samples. Sampling techniques for either type of sample are the same before compositing.

#### 4.1.2 Equipment and Materials

The following is a list of equipment used for radionuclide contaminated soil sampling.

- CDH soil sampler,
- stainless steel scoop,
- stainless steel lab spoon,
- stainless steel mixing bowl or pan equivalent,
- sample containers,
- sample labels,
- wash and rinse tubs,
- phosphate-free, lab-grade detergent (e.g., Liquinox),
- distilled water;
- plastic sheeting,
- sample locations (map and/or list),
- measuring tape or wheel,